

DESCRIPTIONS OF NEW SPECIES OF MARINE  
MOLLUSCA OF SOUTH AUSTRALIA.

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PLATES VI. — VIII.

*Voluta translucida*, *spec. nov.* Pl. vi., figs. 4 and 4a.

Shell elongately ovate, very thin, diaphanous smooth and glistening, of six whorls including the nucleus. This is inconspicuous, merging imperceptibly into the spire-whorls, apparently consisting of one turn and a half, very flatly convex at the apex, smooth. Spire-whorls sloping, slightly convex, suture simple, surface smooth, but for very obsolete incremental striæ. Body-whorl relatively large, smooth but for obsolete longitudinal striæ, which become more conspicuous toward the aperture, especially anteriorly and over the scarcely raised varix of the notch. Aperture elongate-ovate, narrowed posteriorly, dilated anteriorly, and with a very wide shallow notch. Outer lip simple acute thin convex when viewed either laterally or from below. Columella convex in the posterior half, almost straight anteriorly; no callus of the inner lip; fourplicate, the lower three plicæ well-marked narrow and equi-distant, the uppermost less raised and at a less distance.

Ornament, a narrow spiral reddish-brown line close beneath the suture; longitudinal narrow curved lines of the same color, about 16 in the body-whorl, composed of minute zigzags or of very small spirally elongated spots; two indefinite spiral color-bands encircle the whorl, one at the level of the posterior angle of the aperture, another just above the level of the highest columellar plait winding over the dorsum of the notch, composed of prolongations of the zigzags between the longitudinal lines, and thickening of the spots in the lines

Total length, 39·5 mm.; greatest width, 16 mm.; spire, 14·5. Length of aperture, 25 mm.; width, 7 mm.

*Habitat.*—One perfect dead specimen 20 fathoms off Newland Head, outside Backstairs Passage; broken fragments of two in six to ten fathoms Yatala Shoal, and six small immature dead specimens from dredge siftings 22 fathoms Backstairs Passage (*Verco*).

**Harpa punctata**, *spec. nov.* Pl. vi., figs. 3, 3a, 3b.

Shell roundly-ovate, rather thin, smooth, glistening, of four and a-half whorls. Nucleus one turn and a-half, slightly mamillate, apex inserted, first whorl rather excentric, next half-whorl marked off from the first by a depressed scar; suture simple and distinct; distinguished from spire-whorls by its smoothness, but for minute sublenticular longitudinal striæ, and by absence of ornament. Spire-whorls two, gradated, with a marked very slightly rounded angle, behind which the first turn is subconvex, becoming gradually less so, the second is subconcave, and in front of which both are slopingly subconcave; very minutely longitudinally striated under the lens, best seen behind the angle, and still more minutely spirally incised. On the second spire-whorl are also erect reflected curved scales, at gradually increasing intervals, best seen behind the angle, and continuous anteriorly with slightly prominent subvaricose longitudinal striæ. Body-whorl ventricose, slightly excavated close to the suture, forming a slightly rounded angle, then uniformly sloping-convex; surface divided into ten longitudinal areas by the remains of slightly projecting lips, which behind the angle form erect, rounded, slightly-reflected plates, the earlier ones more and more worn away; the areas finely longitudinally and spirally incisedly striate. Aperture large, nearly plano-convex; outer lip uniformly convex, simple, very slightly thickened outside, rather more so about two lines within, edge almost sharp; posteriorly ascending for two lines, slightly reflected and pointed, and forming a marked notch at the suture. Columella slightly convex behind, nearly straight in the anterior half, excavated in the lower fifth. Inner lip distinct, smooth, with callus increasing in thickness from behind forward; posteriorly it forms a short sinus with the ascending outer lip, then is applied spreading somewhat and uniformly over the body-whorl; in the lower half with a free margin least marked where it crosses the varix of the notch, then slightly inflected and incurved to the extremity of the columella. Anterior notch distinct and everted and recurved.

Ornament, nucleus, and spire-whorls of a uniform salmon tint. The latter and the body-whorl closely dotted with small deep chestnut spots, their spiral diameter twice as great as their longitudinal, arranged in longitudinal series so that the dot of each is opposite the space in the next. The body-whorl has also two broad salmon-coloured spiral bands, one from the back of the aperture to a little above the middle of the lip, the other from a little above the middle of the aperture to the lower third of the lip. Just behind the remains of previous lips in these bands are crescents of dark chestnut, and similar crescents are found here and there on the body and spire-whorls close to the suture.

Behind these bands is one narrower and less distinct, and another at and behind the angle ; one between the broad bands, and two in front of the lower one. Between all the bands are narrow indistinct whitish areas. The inner edge of the lip is white, with less distinct and narrower coloured areas corresponding with the bands outside. The throat is translucent, and reveals faintly the external dots and bands.

*Habitat.*—Two recent and two broken shells, 20 fathoms Newland Head ; one immature dead and one broken, 22 fathoms Backstairs Passage (*Verco*).

This new species cannot be confounded with any other form. The distant ribs and dotted ornament distinguish it at once.

Tryon says, in his *Man. of Conch.*, Vol. V., p. 97, "Like *Strombus*, *Harpa* appears to be a completed genus, no new forms rewarding the industry of modern investigators and explorers." The discovery of a new species is, therefore, of peculiar interest. And this is increased by the fact that the two other Australian forms, *H. ventricosa*, Lam., and *H. minor*, Lam., are inhabitants of the warmer regions of the North and North-West parts of the continent.

**Tritonidea** (*Cantharus*, Meek, 1876) **fusiformis**, *spec. nov.*

Pl. vi., figs. 1, 1a, 1b ; var., 2, 2a.

Shell ovately fusiform, solid, whorls seven, including the nucleus. Nucleus conspicuous, of two turns, smooth, convex ; suture deep, apex slightly exerted (in specimens as usually found on the beach it is inconspicuous, and nearly flat.) Spire-whorls four, convex, sutures regular distinct, impressed ; longitudinal costæ regular round, width rather greater than the intervals or the height. Thirteen in the penultimate whorl, crossed by spiral liræ, rounded, valid, not quite so wide as the interstices, nine primary in the penultimate, with two or three secondary threadlets in the wider spaces ; very numerous fine longitudinal sublenticular incised striæ. Body-whorl uniformly convex, contracted anteriorly ; 11 to 12 longitudinal costæ, most marked posteriorly, becoming less valid in front of the periphery. About 30 spiral liræ, fairly regular, with an occasional interstitial threadlet crossed by minute incremental incised striæ. Aperture elongately oval, somewhat narrowed anteriorly. Outer lip uniformly convex, margin sharp, minutely crenulated throughout, outside varicosely thickened from suture to notch by a rounded pad with a corresponding furrow inside of varying depth in different specimens ; internally otherwise smooth, save for an obsolete blunt tooth-like process close to the suture ; in some individuals there are seven or eight narrow plicate denticles nearly equidistant. Columella concavely arcuate above, straight

and slightly sinistrally oblique below, the junction marked by a scarcely bifid spiral callus plica. Inner lip with a thin smooth shining callus applied posteriorly, margined in the lower third, in some individuals with a margin just free throughout; a spiral tooth-like blunt process close to the suture forms with a corresponding one on the outer lip a kind of sinus. Canal short, rather wide, outer lip just everted; scarcely recurved, notched anteriorly. Ornament faint rusty-brown with narrow white band above the sutures, and encircling the body-whorl just above the middle; bounded above by a line one-third of its width, of darker colour, generally most marked on the costæ so as to appear somewhat articulated; a similar but less marked line bounds it below; irregular rust-coloured longitudinal flames extend from the white bands to the anterior extremity of the body-whorl; interior of aperture of a rusty-purplish colour with an indistinct broad whitish spiral band. In life a thin minutely hairy periostracum covers all the shell except the nucleus, and almost hides the ornament.

Total length, 17 mm.; greatest width, 8.5 mm.; length of spire, 8 mm.; body-whorl, 9 mm.

*Habitat.*—Dreged alive 15 fathoms Investigators Straits, one; off Middleton, 15 fathoms, one recent; 20 fathoms in and outside Backstairs Passage, one recent and one dead (*Verco*), Spencer Gulf.

Variety, *T. Adcocki*. Rather more solid, with about 11 spiral liræ in the body-whorl, which become progressively stouter and more distant anteriorly with one or two interstitial threadlets, and where the liræ are stoutest with secondary threadlets on their sides. The longitudinal costæ are rather narrower and higher and quite pronounced posteriorly, but below the periphery they are almost broken up into very large tubercles on the spiral liræ. The aperture is generally more contracted, there are seven well-marked teeth inside the outer lip, besides the posterior process. On the inner lip the columellar projection anteriorly is validly bifid, and at the margin of the lip there are four rather distant teeth in a series diminishing backwards, besides the well-marked posterior tubercle. The white band with its dark margins is less conspicuous, the longitudinal rusty waved flames are rather more marked, though somewhat broken up into dots or blotches chiefly on the nodular intersections of costæ and liræ. Intermediate forms connect this variety with the typical species.

*Habitat.*—Middleton Beach (*D. J. Adcock*).

*Diagnosis.*—Hitherto, in South Australia, it has been called *Cantharus rubiginosus*, Rve., but is quite distinct from that. Its nearest ally appears to be *Buccinum D'Orbigny*, Payrandeau,

Cat. Moll. de Corse, p. 159, pl. 8, f. 4 to 6; also Conch. Icon. Rve. Bucc., f. 44; Man. of Conch. Tryon, Cantharus, vol. III., p. 158, pl. 73, f. 266. Variety *C. Adcocki* approaches this; but from the description, which is meagre, and from the plate, one would judge that the costæ of the foreign shell are less numerous and more valid, the canal is less oblique, while the ornament, beautifully variegated with black and yellow, is different.

**Triton (Argobuccinum) mimeticus**, *Tate (Sipho)*.

Pl. vi., figs. 6, 6a, 6b.

This shell was referred to by me in a previous paper as *Triton mimeticus*, Tate, and I place it now in the subgenus *Argobuccinum*. I obtained a living specimen in 20 fathoms off Newland Head, and a recent dead one in 17 fathoms off Porpoise Head, both places just outside Backstairs Passage, as well as a dead specimen, and fragments of two more. The first two have each three varices, and of these the first lies close behind the third. The canal figured in Proc. Roy. Soc., S.A., 1895, vol. XIX., pl. ii., f. 4, 4a, was fractured. In a living shell 25 mm. in length, with an aperture of 8.5 mm. long, the canal is 8.75 mm. in length. Nearly closed at first, it gradually becomes about twice as widely open at the anterior as at the posterior end; the whole canal is slightly uniformly recurved. There is no periostracum. Above the row of tubercles the shell is fulvus brown, with deeper-tinted blotches; the tubercles are white. Below these it is fulvous-brown, except for a spiral white band about two lines in width, bounded above and below by a fine line articulated white and brown, the joints being rather long, the lower one on the obsolete carina. A third articulated line is at an equal distance in front. The anterior extremity of the canal becomes gradually deep brown. On the outside of the outer lip are four equidistant, rather large squarish brown spots. Operculum large, filling the aperture, ovate, nucleus apical. The dentition (Pl. vi., fig. 6b) shows a central rachidian tooth five-cusped, an inner uncinus or lateral six or seven pointed, and two simple uncini, the inner sickle-shaped, the outer scimitar-shaped. The disposition of the varices is that of *Ranella* and *Argobuccinum*, and the peculiar flat shape of the shell brings it into alliance with these. The simplicity of the uncini, their freedom from saw-points, suggests relation with *Ranella* rather than *Triton*. But the length of the anterior canal compared with that of the aperture, which it fully equals, is found in *Triton*, but is an unknown character in *Ranella*. The only Ranelliform shell in which the canal approaches the aperture in length is *Argobuccinum gigantea*, Lam., and no *Ranella* is known to me in which, as in this, the canal equals one-third of the total length of the shell. The apical nucleus of the

operculum, and the absence of a posterior canal, locate it in *Argobuccinum* as a subgenus of *Triton*, with affinities to *Ranella*.

***Drillia telescopialis***, *spec. nov.* Pl. vii., figs. 1, 1a, 1b.

Shell minute, thin. Whorls six, including the nucleus. Nucleus one turn and a half, smooth, with deep impressed suture, apex exerted. Spire-whorls sloping, nearly straight, gradated, angled at junction of posterior and middle fourth; behind this the whorl is bevelled to the suture, which is distinct and impressed. Whorls sculptured with spiral liræ, four to six in front of the angle, two behind it, flatly rounded, equidistant, wider than the interspaces. Longitudinal liræ numerous, equidistant, about 20 in the penultimate whorl, narrower than the interspaces; in some specimens crossing the spiral liræ and wider than them, generally most marked and forming conspicuous costæ in the second and third spire-whorls; in others narrower, crossed by the spiral liræ, giving a cancellated appearance. Body-whorl nearly cylindrical, angled a little below the suture and again at the periphery, below which it is excavately contracted to the base; provided with spiral liræ, two behind the upper angle, about seven between the angles, and nine or ten below, the most valid forming a minute carina at the lower angle, crossing or crossed by 18 to 20 wider or narrower longitudinal liræ continued to the base, though less conspicuous here. Aperture elongately rhomboidal; wider anteriorly. Outer lip simple, thin, crenulated, with a well-marked semi-circular sinus from the posterior angulation to the suture, lip slanting obliquely from the carina to the anterior notch. Columella straight, inner lip inconspicuous except behind, where there is a columellar callus, from which springs the acute upper boundary of the sinus. Notch simple, anterior extremity truncated obliquely to the left. Ornament uniform, rusty-brown or white.

Length, 45 mm.; breadth, 1.25 mm.

*Habitat*.—Backstairs Passage, 14 dead.

Types in my cabinet.

*Diagnosis*.—I know no *Drillia* with an approximate form.

***Drillia pentagonalis***, *spec. nov.* Pl. vii., figs. 2, 2a.

Shell minute, telescope-shaped, rather thick. Whorls four and a half, without the nucleus. Nucleus absent. Spire gradated, whorls straight-sided in the anterior three-fourths, and bevelled at an angle of 45° to the posterior suture, which is distinct and simple. Five longitudinal ribs, continuous, narrow, erect, prominent; interspaces nearly flat, giving a pentagonal section. Sublenticular inconspicuous longitudinal and spiral striæ, which cross the ribs. Body-whorl with five longitudinal ribs, squarely rhomboidal, angulated near the suture, and carinated at the

periphery, the ribs having projecting points here, and the carina being curved between them; whorl excavately contracted below. Scarcely visible sublenticular longitudinal striæ in upper part; rather less obsolete spiral striæ; these are more valid below the carina, where seven can be counted on the ventral aspect. Aperture narrow, elongately oblong. Outer lip varicosely thickened by a rib, margin thin, simple, and sharp, straight for four-sevenths of its length, between the angle and the carina, curved towards the notch in the lower two-sevenths, and containing a well marked sinus in the upper seventh, rather more than a semi-circle, not quite reaching to the suture. Columella straight, slightly concave below, inner lip inconspicuous. Ornament unicoloured dull stony-white.

Length, 3·5 mm.; breadth, 1·25 mm.

*Habitat*.—Dredge siftings (probably Backstairs Passage), deep water, two dead (*Verco*).

*Diagnosis*.—From *D. telescopialis*, nobis, by the pentagonal shape, the five ribs, and the absence of cancellation.

**Mitra Vincentiana**, *spec. nov.* Pl. viii., fig. 3.

Shell, elongately-fusiform, moderately solid. Nucleus detached in all specimens, and earlier whorls corroded. Spire, eight whorls, slightly convex; suture well marked, linear, minutely channelled. First three or four whorls longitudinally costate, costæ gradually becoming obsolete, but may sometimes be traced to the next whorl, and may be represented by indistinct and irregular plicæ over the rest of the spire; spiral threadlets rounded and indistinct, about 12 in the penultimate whorl; very minute sublenticular incremental longitudinal striæ are also visible.

Body-whorl uniformly very slightly convex; faintly marked close-set longitudinal striæ, and numerous low, unequal rounded spiral threadlets, least marked over its centre. A very distinct spiral furrow starts just above the highest columellar plica, and winds round the dorsum of the base with two or three shallower ones behind it, and about four or five wrinkles in front of it. Aperture oblique, narrow, elongate-oval, contracted above, opening widely into the notch below. Outer lip uniformly curved, except for slight central straightening, simple, thin, sharp, smooth internally. Columella straight, very slightly excavated anteriorly; plicæ four, well marked, intervals regularly narrowing anteriorly; sometimes the elevated anterior margin of the columella exactly simulates a small fifth plica. Inner lip scarcely visible, except below the lowest plica, whence the callus stretches to the notch; only in living specimens can the extent of the lip be recognised, and then only by the polished surface of the aper-

ture. Notch well marked, margins slightly everted. Ornament, uniform dull salmon colour.

Length, 19 mm.; breadth, 6.75 mm.; aperture length, 8.5 mm.; width, 2.75.

*Diagnosis.*—It differs from *M. Rosetta*, Ang., in the costation of the earlier whorls, and in the absence of the punctated spiral incisions. It differs from *M. Australis*, Swns., in its more attenuated form, in the less abrupt contraction of the body-whorl below the periphery, the more uniform curve with a larger radius of the outer lip, and the consequent absence of the contraction of the lower part of the aperture; also in the relative length of the aperture and spire; in *M. Australis*, in the smaller shells, these are as 100 to 103.6, in the larger as 100 to 114.3, in *M. Vincentiana* as 100 to 131.4.

*Habitat.*—Investigators Straits from 13 to 15 fathoms, two recent; off Bank's Islands, Spencer Gulf, in 10 fathoms, one recent; Backstairs Passage, in 17 fathoms, one dead (*Verco*).

Types in my cabinet.

**Surcula Perksi**, *spec. nov.* Pl. vii., figs. 3, 3a, 3b, 3c.

Shell fusiformly ovate, solid, imperforate. Whorls ten, including nucleus. Nucleus two whorls, smooth, inflated, horn-colored. Spire, suture distinct, impressed, finely crenulated; whorls subconvex, with a groove at the junction of the upper and middle third, having a double row of granules just above it, and another row immediately below it. Numerous longitudinal wavy plicæ, about as wide as the intervals, and not quite so high, rounded, about 25 in the penultimate whorl. Abundant fine spiral striæ, 15 in the penultimate, crossing the plicæ, and making them granose. Body-whorl subinflated, contracted at the base, sculpture in the upper part as in the spire; longitudinal granose plicæ, about 40, following the sinuosities of the outer lip, lost at the extreme base, and becoming less valid and more crowded towards the aperture, cut by transverse striæ, which are irregularly alternately larger and smaller. Aperture oblique, elongate-ovate, constricted close to the suture. Outer lip thin, sharp, with a well-marked sinus, about three millimetres deep, with its centre 2.5 mm. from the suture, with the sides convex, and a concave bottom at the row of tiny nodules in front of the groove; a shallow anterior wide sinus just behind the notch of the canal. Canal very short, wide, open, notch rather large, oblique, its left border produced beyond the right; margins slightly everted. Columella straight, slight sinistral deviation anteriorly, smooth from removal of sculpture, callus very thin, applied, inconspicuous, barely free at the anterior extremity. Ornament greyish-white, with small deep rust-colored spots on the rows of granules



just below the suture (sometimes continued from these as wavy longitudinal lines), and on the spiral row just below the groove of the sinus, and finer spiral lines of spots on alternate transverse rows of costal granules, over the body-whorl to the base. Aperture white. Operculum moderately large, elongate-ovate acute (Pl. vii., fig. 3c).

Length, 20 mm.; breadth, 8.25 mm.; aperture length, 10.25; width, 3.25.

Type in my cabinet.

*Habitat*.—Five examples alive in 15 fathoms off Thistle Island, in weed, brought up in two successive casts off the dredge (*Verco*).

*Diagnosis*.—*S. Quoyi*, Rve., is a larger shell, with the sub-sutural band not at all or scarcely nodulated, and with large nodules in the groove of the sinus, and no longitudinal costæ. *S. Oweni*, Gray, has in the spire-whorls the sinus nodules immediately above the suture, instead of at or slightly above the centre of the whorls. The nodules are only half as numerous, 20 in the body-whorl instead of 40; its longitudinal plicæ are very fine, and are just twice the number of the nodules.

It is named after Dr. R. H. Perks, the Secretary of our Section, a naturalist well known in South Australia.

The character of the operculum with its apical nucleus suggests a doubt whether this shell should be placed in *Surcula*. According to Fischer, in his *Manuel de Conchyliologie*, p. 591, this genus has an operculum with its nucleus medio-lateral and internal like that of *Clavatula*, of which he gives a figure. I find, however, that the operculum of *Surcula Quoyi* has its nucleus apical. The two shells are conchologically closely allied. I place my species, therefore, with it, in *Surcula* for the present, and leave the character of the operculum and its importance as a generic diagnostic for further consideration.

***Turricula apicincta*, spec. nov.** Pl. viii., figs. 4, 4a, 4b.

Shell turretted, fusiform, rather thin, shining. Spire, elate of eight whorls, including nucleus. Nucleus distinct dextral, two turns, excentric, sometimes slightly mammillate, smooth, suture well marked, pinkish brown, retaining its color in the dead white shell, and prettily tinting its apex. Spire-whorls sloping, scarcely convex, the convexity varying in different individuals. Longitudinally finely costate throughout; costæ most valid in the earlier whorls, about 35 in the penultimate, slightly nodulated at the posterior suture, wider than the interstices in the earlier whorls, narrower in the later, rounded, rather broader than high; sutures distinct impressed. Transverse liræ numerous, three in the penultimate whorl, flattened, wider than the interstices,

which are scarcely more than incisions, crossing the costæ, but less valid there than in the intervening furrows. In the first three whorls, just below the suture (the distance increasing gradually in successive whorls) a well-marked transverse furrow cuts off a row of subsutural nodules from the costæ; in the fourth whorl this is less marked, and the other spiral furrows become nearly equal to it, gradually diminishing in depth towards the centre of the whorl. Last whorl subconvex, convexity varying slightly in different specimens, contracted just below the periphery. Longitudinal plicæ numerous, close-set, irregular in size and distance, degenerating into marked incremental striæ towards the aperture. Spiral incisions well marked below the suture to the middle of the whorl, obsolete in front of this, though still visible under the lens; five or six valid spiral furrows over the contracted part behind the notch. Aperture obliquely elongately oval. Outer lip nearly straight in the upper two-thirds, then bent to the left at an angle of  $135^{\circ}$ ; simple, acute. Columella straight for one-half its extent, then slightly bent to the left; plicæ four, sometimes the last forms the margin of the canal, sometimes is distinctly above it, equidistant, well marked, sometimes ceasing at the margin of the callus of the inner lip, which is sharply defined and at the lower part free, so as to form a minute rimate perforation with the varix of the notch. Canal wide, short, scarcely reflected, distinctly notched. Ornament, color greyish-white, a broad indistinct pinkish-brown subsutural band, maculated at intervals with deeper brown patches; in some examples only these are visible. On the body-whorl three indistinct fine bands either continuous or composed of brown dots, the highest of which appears on the spire-whorls, the lowest may be continuous over the anterior part of the shell from a little above the columellar plicæ. When dead, the shell is nearly pure white with a pinkish tip, and faint brownish maculations.

Length, 11.20 mm.; breadth, 3.5, or 10 mm. and 3.75; length of aperture, 4.5 mm.; width, 1 mm.

*Diagnosis.*—It resembles *M. Tasmanica*, Ten.-Woods. (lent to me by Mr. May, of Hobart), in the ribbing and transverse girdling, but the shape is different. The latter is ovate and attenuate at both ends, with these dimensions: 11 mm. long., 5 mm. broad; length of aperture, 6 mm. fully. It is brown, with two or three yellowish-white bands—mine is greyish-white, with brown bands, but this distinction may simply be a question of width of bands, in which circumstance mine vary widely.

*Habitat.*—St. Vincent Gulf, 17 fathoms, six dead; off Newland Head, 20 fathoms, nine dead (*Verco*).

Types in my cabinet.

**Imbricaria porphyria**, *spec. nov.* Pl. viii., figs. 5, 5a.

Shell ovate-conic, solid, of five whorls, exclusive of nucleus. Nucleus two whorls, smooth, flattened, papillary. Spire short, slightly acute, about one-fourth the total length of the shell, whorls subconvex, roundly angled at lower part, longitudinal plicæ indistinct, low, inequidistant, closer on the posterior whorls, with finer distinct regular longitudinal striæ under the lens. Spiral striæ, about seven on the penultimate whorl, sublenticular, flat crowded, crossing the plicæ. Sutures distinct, very slightly margined, and minutely crenulated by the longitudinal striæ. Body-whorl swollen just below the suture to form a rounded shoulder, then with a regular sloping curve to the anterior extremity. Fine sublenticular longitudinal growth-lines, close, most marked at the suture, and behind the shoulder, less marked near the aperture; spiral striæ close-set, low, most marked behind the shoulder, and just above the notch, very faint over the rest of the whorl. Aperture narrow, widest in the middle, outer lip nearly straight, simple, acute, smooth. Inner lip straight, very thin polished callus. Three very distinct, equal, nearly transverse, equidistant plaits occupying the middle third of the aperture with an obsolete one immediately below. Ornament, uniform mauve tint inside and out, nucleus dark mauve; dead shells are white.

Length, 10 mm.; breadth, 5.75 mm.; spire, 2.25 mm.; length of aperture, 7.25; width, 1.25.

*Habitat.*—In and outside Backstairs Passage, Investigators Straits, dredged alive at 15 to 20 fathoms, five; and 36 recent and dead (*Verco*). West Coast of Yorke Peninsula (*Tate*).

Types in my cabinet.

P. Fischer in his *Manuel de Conchyliologie*, p. 614, says *Imbricaria* of Schumacher has no operculum. The shell I describe has one, but I leave the discussion of its generic location for a future communication.

**Phos tasmanica**, *Ten.-Woods (Josepha)*. Pl. vi., figs. 5, 5a;  
Pl. viii., figs. 6, 6a.

Shell ovately fusiform, solid, opaque. Whorls including the nucleus 9; nucleus of two whorls, smooth, inflated. Spire-whorls convex, angled at their centre, behind this slightly excavated by a rather wide, conspicuous groove, behind this a prominent rounded subsutural band. Longitudinal plicæ numerous, regular, 16 in the penultimate whorl, slightly coronated at the angle, and forming slightly elongated nodules on the subsutural band. Distinct engraved spiral lines, crossing the plicæ, three or four in front of the angle, two or three in the groove, producing, if well marked, a row or two of small round granules there. Body-

whorl with the subsutural nodulated band, anterior to this the excavated groove, followed by its angle of junction with a uniform, slightly convex surface. The longitudinal plicæ may extend almost to the base, or may become obsolete at the periphery; and generally become less marked towards the aperture in older shells. Spiral engraved lines 13 to 15, equidistant, most marked at the base, so as to form there about five obliquely rounded spiral liræ. Aperture obliquely elongate-ovate, contracted behind between the subsutural band and a small columellar callus, minutely canaliculate. Outer lip simple, thin, slightly sinuous, internally seven narrow spiral plicate teeth, equidistant, extending to within a line of the margin. Columella nearly straight, concave at the base, where the callus is thick and closes the umbilicus; a rather broad spiral plica lies over the situation of the continuation backwards of the varix of the notch, it may be simple or bifid or three or four divided. Notch well marked, with minutely everted margins, varix of notch valid, and bounded above by a definite slightly elevated edge continuous with the sharp right margin of the notch. Ornament, rusty-brown or deep mahogany, with bluish-white patches composed of several oblong spots disposed between the engraved lines, most numerous just above and below the angulation and towards the base. In these areas the brown and whitish spots may be almost regularly articulated, or so disposed as to form longitudinal brown flames. Living shells are often brightly glistening, dead shells uniform dull rusty brown.

Length, 25 mm.; breadth, 10 mm.; spire, 14 mm.; aperture, 10 mm. long, 4.5 broad.

*Habitat*.—Along the whole coast of South Australia, at low water. Eyre's Sandpatch, West Australia, large specimens.

*Remarks*.—This shell has been known in South Australia as *Cominella suturalis*, A. Adams see list of Aquatic Mollusca of South Australia, D. J. Adcock, 1893. But that shell is a *Nassaria*, and as figured in Tryon's *Man. of Conch.*, pl. 84, fig. 542, and as examined in a specimen sent to me identified by G. B. Sowerby, is a shell quite unlike the South Australian form. The dentition of *Nassaria*, as given in the *Man.* Vol. 3, pl. 27, fig. 34, shows a six-cusped rachidian tooth, while our shell has only three cusps. I had identified it as *Josepha Tasmanica*, Ten. Woods, *Pros. Roy. Soc., Tasmania*, 1878, p. 32, upon which he founded his subgenus *Josepha*; but it had never been figured, and on enquiry it was learned that the type specimens in the Hobart Museum had been mislaid, and could not be referred to. However, Miss Lodder, of Ulverstone, Tasmania, has lately forwarded to me two shells, identical with this *Phos Tasmanica*. They were found without a label among some shells presented by

Mr. Petterd to the Launceston Museum, and a label *Josephia Tasmanica*, in his handwriting, was found in the same box without any shells attached. Mr. Petterd, to whom she referred them, says he believes these shells are the co-types of Wood's species, which was described from shells in Mr. Petterd's possession. There is, therefore, no doubt about the identity. As to its generic location: Woods created the subgenus *Josephia* for it under *Cominella*, because of its columellar plait, but Tryon says, "If it is really distinct from *Cominella*, why is it not a *Phos*?" Man. of Conch., Vol. 3, p. 207. I know of no reason why it should not be regarded as a *Phos*. Its dentition, given on pl. viii., fig. 6, is identical with that of the genus *Phos* given in Tryon's Man. Vol. 3, pl. 27, fig. 35. Its shape approximates that of *Phos virgatus*, Hinds, op. cit., pl. 83, fig. 502, and it has a columellar plication. This varies in validity in different examples, but is always present, and is not merely a projection of the varix of the notch through a thin layer of columella callus. For this callus at its margin may be quite devoid of a plication, which is yet distinct enough a little further within the aperture, where it may show two, three, or four ridges which have been subsequently laid down. I have, therefore, placed it in the genus *Phos*, and discarded the subgenus *Josephia*.

***Myodora corrugata*, spec. nov.** Pl. viii., figs. 1, 1a, 1b.

Shell transversely ovate, thin, subequilateral, inequivalve Umbos apposed, acute, retroflexed. Anterior dorsal margin uniformly slightly convex. Posterior dorsal margin uniformly slightly concave; the two forming an angle of about  $130^{\circ}$ . Ventral margin slightly convex, anteriorly rising rapidly to form a well-rounded curve with the front dorsal margin; posteriorly forming a marked angle, slightly more than a right angle, with the truncated posterior extremity; in large specimens the ventral margin is slightly concave in front of this angle. Posterior extremity almost vertically straightly truncated, the end sloping slightly downwards and forwards, making a right angle with the post-dorsal margin. Right valve convex, well-marked ridge from umbo to postero-inferior angle; sculptured with very distinct, regular, concentric ribs, about one-half the width of the interspaces, and as high as wide, smooth and rounded, continuous from one dorsal margin to the other. Left valve a little smaller than the right, almost flat, very slightly rounded transversely, an indistinct ridge from umbo to postero-inferior angle, behind which the surface is quite flat; sculpture like that of the right valve, but not quite so deep, especially behind the umbonal ridge. There is a long narrow post-umbonal area on the dorsal hinge-line, smooth, slightly excavated, the right valve composing rather

the larger part. Ventral margin very thin and simple. Internally, valves shining, pearly, indistinctly marked by the corrugations of the outside, furrows within corresponding with ridges without. A small triangular cartilage-pit within each apex; there is a small umbonal ossicle. The right valve has a long linear furrow, with a scarcely projecting long lamina at its inner margin, for the reception of a long lamina on the left valve along the whole of the post-dorsal margin. The edge of the anterior-dorsal margin of the right valve scarcely projects, so as to enclose the left valve, and allow it to rest on the ledge within.

Length, antero-posterior, 14.25 mm.; umbo-ventral, 9 mm.; sectional diameter of apposed valves, 3.5 mm.

*Habitat*.—Dredged alive, 15 to 20 fathoms, Yankalilla Bay, Backstairs Passage, and Spencer Gulf five specimens, and 23 valves (*Verco*).

***Corbula compressa*, spec. nov.** Pl. viii., figs. 2, 2a, 2b.

Shell triangulary oval, solid, compressed, inequivalve, inequilateral. Umbols in contact, acute, curved slightly forwards. Posterior dorsal margin sloping, straight for two-thirds of its length, then descending at an obtuse angle. Anterior dorsal margin about three-fourths as long as the posterior, with which it makes rather more than a right angle, scarcely excavated in front of the umbos, and forming a well rounded anterior extremity with the ventral margin. The front half of this is straight, then slightly convexly ascending, to join the posterior dorsal margin at its junction with which it is slightly excavated, so as to form a minute beak. The right valve is larger than the left. Along the anterior dorsal margin, the rounded front end, and the anterior two-thirds of the post-dorsal margin, the right valve scarcely projects beyond the left. At the posterior extremity it is deeply folded over it at a very slightly rounded angle, the depth of the fold diminishing anteriorly. From the umbo on each valve a ridge curves obliquely forwards, but is soon lost in the rounded surface of the valves; another extends obliquely backwards to the posterior inferior angle, sharply defined. The post-umbonal area is, in the left valve, somewhat excavated throughout; in the right convex, except for a slightly concave groove close to the ridge, diminishing in width from the umbo backwards. Sculpture, concentric incremental striae, more distinct and at wider intervals with age, fewer and more valid in the left valve; in the left posterior umbonal area forming distant sharp ridges, in the right being very numerous and fine. In some specimens are radial interstitial raised microscopic striae on both valves, more marked on the left. Ornament china-white, mottled with small translucent brown irregular zig-zag spots, arranged somewhat radially.

Length, 10 mm.; breadth. 6·25 mm.; thickness, 4 mm.

*Habitat*.—Yankalilla Bay, in sludge, at 20 fathoms, many alive; Backstairs Passage, Port Lincoln, Eastern Cove, Kangaroo Island, at varying depths, several (*Verco*).

Types in my cabinet.

*Diagnosis*.—Its nearest ally in our waters is *C. scaphoides*, Hinds, but the latter is a more obese shell, the transverse section is more uniformly convex, the anterior dorsal margin is comparatively longer, the angle between the anterior and posterior margin is more obtuse, the left valve is not so included in the right posteriorly, the surface behind the umbonal ridge is not so wide, or so excavated, and so the ridge is not so valid. A nearer ally is *C. luteola*, Carpenter, from San Diego Bay, which has the same compressed form, but in this species the anterior part of the shell is longer than the posterior, the junction between the anterior dorsal margin and the ventral is a larger curve, and the right valve does not include the left.

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NOTE UPON MUREX UMBILICATUS, *Ten.-Woods*. Pl. vii.,  
figs. 4, 4a, 4b, 4c.

Adams's name *scalaris* has priority of Wood's *umbilicatus*, but the former is pre-occupied by Brocchi for a fossil *Murex*, and is thus excluded. So Tryon proposed the name of *M. Angasi* as a substitute for *scalaris* (*Man. of Conch.* Vol. II., p. 109). He did not, however, know its identity with *M. umbilicatus*. This latter name, therefore, has priority. The identity is vouched for by Brazier. He sent specimens of the shell to H. Adams, who said it was identical with that named *M. scalaris* by his brother, A. Adams (*Proc. Linn. Soc. New South Wales*, Vol. VIII., Part I., p. 116). Sowerby, in *Thes. Conch. Mon. Murex*, p. 54, gives it in his alphabetical list as *scalaris*, Ad., Gen. *Fusus*?, without description or plate, and does not notice it in his *Mon. Fusus*. Tryon gives no plate of either *scalaris* or *umbilicatus*; I have therefore had a figure of *M. umbilicatus*, *Ten.-Woods*, from St. Vincent Gulf, with its operculum executed.

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EXPLANATION OF PLATES.

PLATE VI.

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| Fig.       |  |
| 1, 1a.     | <i>Tritonidea fusiformis</i> , <i>Verco</i> .          |
| 1b.        | Details of sculpture.                                  |
| 2, 2a.     | Var. <i>Adcocki</i> , <i>Verco</i> .                   |
| 3, 3a, 3b. | <i>Harpa punctata</i> , <i>Verco</i> .                 |
| 4, 4a.     | <i>Voluta translucida</i> , <i>Verco</i> .             |
| 5, 5a.     | <i>Phos tasmanica</i> , <i>Ten.-Woods</i> .            |
| 6.         | <i>Triton (Argobuccinum) mimeticus</i> , <i>Tate</i> . |
| 6a.        | Operculum of <i>Triton (Argobuccinum) mimeticus</i> .  |
| 6b.        | Dentition of <i>Triton (Argobuccinum) mimeticus</i> .  |

## PLATE VII.

- 1, 1a, 1b. *Drillia telescopialis*, *Verco*.  
 2, 2a. *Drillia pentagonalis*, *Verco*.  
 3, 3a. *Surcula Perksi*, *Verco*.  
 3b. *Surcula Perksi*, details of sculpture.  
 3c. *Surcula Perksi*, operculum.  
 4, 4a. *Murex umbilicatus*, *Ten.-Woods*.  
 4b. *Murex umbilicatus*, details of sculpture.  
 4c. *Murex umbilicatus*, operculum.

## PLATE VIII.

- 1, 1a, 1b. *Myodora corrugata*, *Verco*.  
 2, 2a, 2b. *Corbula compressa*, *Verco*.  
 3. *Mitra Vincentiana*, *Verco*.  
 4, 4a. *Turricula apicitincta*, *Verco*.  
 4b. *Turricula apicitincta*, details of sculpture.  
 5. *Imbricaria porphyria*, *Verco*; 5a. Operculum, anterior extremity probably broken off.  
 6. Dentition of *Phos tasmanica*, *Ten.-Woods*.  
 6a. Operculum of *Phos tasmanica*, *Ten.-Woods*.